

ROANOKE RIVER BASIN

02057400 SMITH MOUNTAIN LAKE NEAR PENHOOK, VA

LOCATION.--Lat 37°02'29", long 79°31'19", NAD83, Pittsylvania County, Hydrologic Unit 03010101, at dam on Roanoke (Staunton) River 6.5 mi northeast of Penhook and at mile 314.0.

DRAINAGE AREA.--1,024 mi².

PERIOD OF RECORD.--September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 19, 1965, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete dam. Two ungated spillways, one near each end of dam, with crests at elevation 795 ft, are each 105 ft long. Initial filling began in September 1963 during construction; water in reservoir first reached minimum power pool, elevation, 787 ft, in May 1965. Total capacity at maximum pool elevation, 811 ft, is 1,517,000 acre-ft of which 375,000 acre-ft is above the spillway crest; 157,800 acre-ft is normally used for power between elevation 787 ft, minimum power pool, and the spillway crest. Capacity at invert of lowest penstock, elevation, 601 ft, is 100 acre-ft. Figures given herein represent total contents. Reservoir is part of the Smith Mountain Combination Project (pumped storage) which is used for hydroelectric power, flood control, low-water regulation for pollution abatement and water supply, water releases for downstream fish spawning, and recreation.

COOPERATION.--Records were provided by the American Electric Power.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,250,200 acre-ft, Apr. 27, 1978, elevation, 799.8 ft; minimum (after first filling to minimum power pool), 995,400 acre-ft, Jan. 23, 1970, elevation, 787.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,144,200 acre-ft, Mar. 18, elevation, 795.1 ft; minimum, 1,048,200 acre-ft, Sept. 18, elevation, 790.4 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	794.00	1,121,600	-
Oct. 31.....	792.80	1,097,100	-24,500
Nov. 30.....	792.90	1,099,200	+2,100
Dec. 31.....	793.00	1,101,200	+2,000
CAL YR 2000.....			-16,300
Jan. 31.....	794.00	1,121,600	+20,400
Feb. 28.....	794.60	1,133,800	+12,200
Mar. 31.....	794.60	1,133,800	0
Apr. 30.....	794.20	1,125,700	-8,100
May 31.....	794.00	1,121,600	-4,100
June 30.....	793.30	1,107,300	-14,300
July 31.....	793.10	1,103,200	-4,100
Aug. 31.....	792.10	1,082,800	-20,400
Sept. 30.....	791.60	1,072,600	-10,200
WTR YR 2001.....			-49,000

02057400 SMITH MOUNTAIN LAKE NEAR PENHOOK, VA--Continued

